

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2004/002516

International filing date (day/month/year)
11.06.2004

Priority date (day/month/year)
13.06.2003

International Patent Classification (IPC) or both national classification and IPC
G01N1/20, G01N33/04, A01J5/04

Applicant
THE TECHNOLOGY PARTNERSHIP PLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/002516

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/002516

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/002516

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 9-26

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 9-26
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/002516

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-8

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	8
	No: Claims	1-7
Inventive step (IS)	Yes: Claims	
	No: Claims	8
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item IV

Lack of unity of invention

This Authority considers that there are 3 inventions covered by the claims indicated as follows:

- I: Claims 1-8 directed to a milk sampling device
- II: Claims 9-16 directed to a milk transportation device
- III: Claims 17-26 directed to a milk collection device

The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows:

The prior art has been identified as document D1: GB 2231658 and discloses:

An animal product sampling device comprising: a well arranged (D1, feature 20), in use, to collect fluid flowing through a fluid tube connected to the well (D1, feature 22); a drain, one end of which is connected to the well, which is arranged such that, in use fluid from the well may pass to the fluid tube connected to the well (D1, feature 24); and a sample tube arranged, in use, to draw fluid from a zone of fluid of reduced turbulence within the well (D1, feature 28), wherein the device is arranged such that, in use, the zone of fluid of reduced turbulence, from which a sample of fluid can be drawn through the sample tube, is created in the device due to the dimensions of the well and the drain.

The sampling device is integrated into a milking apparatus (D1, pag 3, line 23).

Invention I:

It follows that the following technical features of claims 3 makes a contribution over the prior art and can be considered as a special technical feature within the meaning of Rule 13.2 PCT:

The sampling device is disposable.

The problem solved by this special technical feature can therefore be construed as:

Having a easily usable milk sampling device

Invention II:

It follows that the following technical features of claims 9 makes a contribution over the prior art and can be considered as a special technical feature within the meaning of Rule 13.2 PCT:

There is a milk sample transportation device comprising a plurality of tubes, varying means and evacuating means.

The problem solved by this special technical feature can therefore be construed as:

Having a device to direct the milk sampled into a collector or analyser.

Invention III:

It follows that the following technical features of claims 17 makes a contribution over the prior art and can be considered as a special technical feature within the meaning of Rule 13.2 PCT:

There is milk sample collecting device, comprising a moveable frame, supporting a plurality of chambers arranged to collect samples, the frame being positioned, in use, to accept, in the chambers, samples from an outlet of a sample selecting device; and a frame driver for moving the frame relative to the outlet in order to allow the samples to be dispensed into the chambers.

The problem solved by this special technical feature can therefore be construed as:

Having a collector in order to analyse different samples with different reagents or methods.

In conclusion, the groups of claims are not linked by common or corresponding special technical features and define 3 different inventions not linked by a single general inventive concept.

The application, hence does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D2: FR-A-2 797 323 (FEDERATION DES COOPERATIVES LA) 9 February 2001 (2001-02-09)

D3: US-A-4 325 028 (TAKAHASHI TOSHIO) 13 April 1982 (1982-04-13)

1) The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-7 is not new in the sense of Article 33(2) PCT.

The document D2 discloses (the references in parentheses applying to this document):

An animal product sampling device comprising: a well arranged (D2, feature 2), in use, to collect fluid flowing through a fluid tube connected to the well (D2, features 1 and 13); a drain, one end of which is connected to the well, which is arranged such that, in use fluid from the well may pass to the fluid tube connected to the well (D2, feature 11); and a sample tube arranged, in use, to draw fluid from a zone of fluid of reduced turbulence within the well (D2, feature 12), wherein the device is arranged such that, in use, the zone of fluid of reduced turbulence, from which a sample of fluid can be drawn through the sample tube, is created in the device due to the dimensions of the well and the drain.

The sampling device is integrated into a milking apparatus (D2, pag 1, line 1-2).

The device is disposable (D2, page 2, line 7-8)

The device comprises a self-draining valve (D2, page 2, line 14-16)

2) The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 8 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D2 is regarded as being the closest prior art to the subject-matter of claim 8 and discloses (the references in parentheses applying to this document):

The subject-matter of claim 1 (see paragraph above).

The subject-matter of claim 8 therefore differs from this known D2 in that: there is two or more electrodes that contact the fluid being sampled in use, in order to measure ionic phenomena of the fluid.

The problem to be solved by the present invention may therefore be regarded as to have a pre-analysis in the milk sampler.

The solution proposed in claim 8 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

The feature of the electrodes is described for example in document D3 (see abstract) as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal option to include this feature in combination with the taught found in document D2 in order to solve the problem posed.

3) The application does not meet the requirements of Article 6 PCT, because claims 1, 5-7 are not clear.

3.1) The definition "arranged such that, in use, the zone of fluid of reduced turbulence, from which a sample of fluid can be drawn through the sample tube, is created in the device due to the dimensions of the well and the drain" is not clear and appears to be a result to be achieved more than a concrete definition of the well and the drain.

3.2) The feature of claim 5 (the filter), is not referred to in the description. Claim 5 is therefore not supported by the description as required by Article 6 PCT.

3.3) It is not clear what is the link between the "proportional sampling device" and the milk sampler in claims 6 and 7. The milk sampler of D2 can be also considered as being a proportional sampling device, such that, in use a sample is continually taken and being detachable.